

# Starting a Food Garden

*There is a special satisfaction in munching a homegrown vegetable that is difficult to describe. Along with the pride of accomplishment, there's a sense of security and a reminder of the important, simple things that are often lost in our busy lifestyles.*

Homegrown food makes good environmental sense. Food which travels from your yard to your dinner plate protects air quality by eliminating the need for long distance transport. Ecological gardening actually improves the health of the soil by restoring fertility and productivity. Growing your food without toxic products eliminates the worry of chemical residues, and helps you and your community stay healthy.

## Selecting a Location

The first step in preparing for a food garden is making sure that you have a suitable site.

**Sunlight** – Vegetable gardens need at least six hours of direct sunlight each day. Shady spots are simply not suitable.

**Water** – Vegetables are thirsty plants, and you will need access to water throughout the growing season. Avoid planting close to trees, since their roots will compete with your vegetables for the water in the soil.

**Soil** – Vegetables thrive in fertile, deep topsoil which is rich in organic material. You can improve the quality of your soil by adding compost and other organic amendments, but if the topsoil is very shallow, you may need to buy extra topsoil to get started.



## Preparing a Garden Bed

Vegetable gardens should be carefully prepared before planting to remove sod, weeds, and to loosen up the soil so that plant roots can grow quickly. If you are starting from scratch and plan to make a garden out of a grassy area, here are some options for preparing the site.

**Rototill** – Sodded areas can be rototilled (although it is difficult work!) to break up the sod and expose the soil. It's best to rototill at least twice, approximately two weeks apart, to break up clumps of grass roots, dig under newly sprouted weed seeds and create a fine seed bed.

**Handspade** – A new garden can be prepared with a spade (also hard work, so pace yourself, or call in lots of helpers!). Stake out your garden area and lift the first couple of inches of sod and place in your compost pile. Shake sod pieces to save as much soil as possible. Then turn the exposed earth, breaking up clods. Avoid walking on the area you have spaded to prevent soil compaction.

**Mulch** – If you are not in a hurry, you can prepare a garden site with much less work by mulching your site with a heavy covering to block out all sunlight. This process eliminates and composts all existing vegetation by blocking the sunlight, preventing plant growth. The mulch should be in place for an entire growing season, the year before planting your vegetables. This mulch could consist of a deep layer of leaves (8-12"), old carpets, sheets of newsprint or cardboard, or a layer of black



plastic. Black plastic is very effective and can be covered with a layer of straw or bark mulch to be more aesthetically pleasing while you wait for your plot to be ready to plant.

**Raised Beds** – Vegetables can also be grown in raised growing beds above the level of the existing soil. You can use the soil in your yard, or purchase soil. Wooden boxes can be built to hold the soil in place. With this method, you can grow a vegetable garden in an area with little or no soil (even on top of paved areas, as long as you can provide at least 12" of soil depth). You can install raised beds on top of existing lawn, as long as you cover the grass with 8-10 layers of newsprint, to prevent the grass from growing through the new soil and vegetables.

## Improving the Soil

Organically rich soil is the foundation of a healthy garden. Decomposed organic material (known as humus) provides an amazing list of benefits for a garden.

Humus:

- helps soil to hold moisture
- breaks up heavy soil, allowing air to circulate
- attracts beneficial organisms such as earthworms
- helps soil to hold nutrients
- reduces soil erosion

Finished compost and well rotted manure are excellent sources of organic matter which can be dug into the top layer of your soil or used as a top dressing around established plants. Vegetable gardens especially benefit from applications of well-rotted manure if it is available. If you have the time, crops such as annual wheat, annual rye or buckwheat can be sown into your plot the year before planting your vegetables, and then turned under the following spring to add extra organic material (green manure).

Three of the nutrients most needed for plant growth are nitrogen, phosphorous and potassium. Ask at garden centres for a blended organic fertilizer. Fish emulsion (sold locally under the name 'Muskie'), is a good all-purpose organic fertilizer, especially useful when transplanting seedlings. See the Green-Up fact sheet "Fertilizers" for more detailed information.

New garden sites probably won't need much, if any, additional fertilizer. However, old, exhausted gardens will benefit from limited applications of all-purpose fertilizer as well as compost, to help restore essential nutrients.

Loosen up the soil with a spade or fork as deeply as possible, breaking up clumps and removing weeds and stones. Work in your compost, manure or fertilizer, and rake the soil surface level. Now you're ready to plant!

## Preparing to Plant

**Deciding What to Grow** – As a new vegetable gardener, start by growing plants which are fairly easy to grow, and which you enjoy eating. Good choices are beans, beets, carrots, chard, cucumbers, leaf lettuce, onions, peas, peppers, potatoes, radish, spinach, squash and tomatoes.

To help your garden be more resistant to pests, integrate herbs and flowers into your plot. Herbs attract beneficial insects, and repel some undesirable ones. They're also useful to have around when it's time to cook your vegetables! Many flowers attract beneficial insects which prey on the bugs that eat your vegetables. Think about including herbs such as dill, fennel, anise, caraway and mints, and flowers such as daisies, black-eyed Susan, purple coneflower and coreopsis (composite flowers).

**Heirloom Plants** – Global market forces encourage the production of uniform vegetables which pack and ship well, sometimes at the expense of flavour and nutrition. An unfortunate result of this large-scale specialization is a reduction in genetic diversity – the building blocks for adaptation to changing conditions. You can play a role in preserving diversity in food crops by growing some heirloom vegetables. These are varieties of plants which have existed for at least 60 years, and are open-pollinated – they produce their own seed and don't require complex cross-pollination procedures.

**Seeds or Transplants?** – Many vegetables can be grown successfully from seed sown directly in the garden when the weather warms up. Some varieties grow slowly, and would not mature before frost if you started with seeds outdoors in spring. Vegetables which should be grown from transplants (young plants) set out in spring include tomatoes and peppers. These are readily available at garden centres in spring, or you can start your own indoors if you have very sunny, southern windows. If you want to grow large onions for cooking, pick up onion sets (bulbs) from a garden centre. Potatoes are started from pieces of seed potatoes, also available at garden centres.

**When to Plant?** – Vegetables have varying tolerances to warm and cold weather. This affects the time to plant and harvest them. Frost (temperatures close to the freezing point) is lethal to many vegetables, but others can tolerate cooler temperatures, and even some frost. When preparing to plant your garden, keep in mind the vegetables that prefer cool or warm temperatures.

– **Cool Season Vegetables** (plant in early May):

beets, carrots, chard, lettuce, onions, peas, radish, spinach

– **Warm Season Vegetables** (plant in late May):

beans, cucumbers, peppers, potatoes, squash, tomatoes

## DRAWING A PLAN

Especially if you are a new gardener, it is helpful to draw a plan on paper of what you plan to grow, and where it will be placed in your garden. When you're getting started, it's probably easiest to plant your vegetables in rows, where it's easier to see the weeds, and keep track of what is growing where. In a more established site, and with a little more experience, plants can be grown in solid blocks, which helps to produce a bigger harvest in a smaller space. Remember to leave room for some pathways in your plan so you can easily get into the garden for maintenance and harvesting, even after the plants are fully grown.

Plants that will become large when they mature, need more space between the rows, while smaller plants can be planted more closely. Here's a basic guideline for spacing:

- **Large vegetables** (2-3' between rows):  
tomatoes, potatoes, cucumbers, squash (the last two are vines which grow 2-3' in length along the ground)
- **Medium vegetables** (1½-2' between rows):  
beans, beets, carrots, chard, peas, peppers
- **Small vegetables** (1-1½' between rows):  
leaf lettuce, onions, radish, spinach

## Planting Day!

**Weather** – Choose a planting day when the weather is dry, and the soil is dry enough not to be mucky. Walking and planting when the soil is wet compresses the soil, squeezing out the air and making it difficult for plant roots to grow comfortably. Make sure that you plant your warm season vegetables after both the air and the soil have warmed up, and the danger of frost is past.

**Assemble Tools and Seeds** – Helpful tools to have when planting include a shovel, rake, small hand spade, string and wooden stakes, watering can.

**Planting the Garden** – Mark out the location of your first row of vegetables with stakes and string, trying not to walk on the planting area. Loosen up the soil if necessary with a spade or fork. Make a shallow trough in the soil along the planting row, using your hand, a trowel, or the wooden end of your rake. Carefully read the directions on the seed packet, and place the seeds in the row at the recommended spacing. (Be careful with small seeds like carrots that you don't plant them too close together – it takes a lot of time to thin them later!)

Seeds can then be lightly covered with soil. Generally, bigger seeds are planted deeper than tiny seeds – two times the size of the seed is a good depth for planting them. Firm the soil gently over the seeds, and move on to the next row.

**Transplants** – If you're putting young plants, such as tomatoes and peppers in the garden, dig a shallow hole, and plant each plant individually. If your tomato plants are very tall at planting time, plant them a little more deeply – tomatoes will grow roots along the stem and become a more robust plant. Give transplants a thorough watering, and protect them from bright sunlight and strong winds for a couple of days while they adjust to their new homes.

**Potatoes** – When planting potatoes, dig holes about 1 foot deep, and place a piece of a potato in each hole (each piece must have at least one "eye" – a spot where new growth emerges). Potato plants become very large, so be sure to leave ample space between each row.

## Caring for the Garden

**Watering** – Try to keep the soil from drying out until your seedlings begin to sprout. This is especially important for seeds such as carrots and parsley. If possible, water a couple of times a week while the plants are young (make sure the water penetrates a couple of inches into the soil – scratch down to see how far it reaches). Less water should be required as the plants mature, but in periods of severe drought, extra water may be necessary. However, when plants are larger, it takes much longer to water them thoroughly. Soaker hoses left on for several hours can help to give plants a deep drink.

Early morning is the best time to water. Avoid watering at midday as much of the water is lost to evaporation; evening watering can lead to fungus diseases. Drip hoses or soaker hoses work well in giving a deep drink to plant roots.

Also avoid working in the garden when the leaves of the plants are wet. This can quickly spread disease and fungal spores throughout the garden.

**Thinning** – If your plants are growing tightly together when the seeds come up, you may need to thin them out. Put the extra sprouts in the compost. The remaining plants will be much stronger once they are released from competition.

**Mulching** – When the plants in your garden are well established (at least 2-3 inches tall), cover any bare soil with an organic mulch, and reapply throughout the growing season when needed. This keeps weeds down, holds moisture and feeds the microorganisms in the soil. Straw, newspaper, finished compost and wood chips can all be used as mulch. Try to ensure that the garden is moist when you mulch it – and the mulch will help to conserve the water.

**Staking** – Some vegetables, such as tomatoes, need staking to grow their best. There are many ways to tie up tomato plants, but be sure to use sturdy stakes. When tomato plants get large and laden with fruit, they become very heavy. Use strips of cloth (old sheets etc.) to tie up tomato vines, so

that the branches are not cut by the ties.

If you grow pole beans or climbing peas, you will need to install poles or netting for the plants to climb on.

**Pest Control** – Insects are a normal part of garden life – in fact, many insects are very helpful in the garden, breaking down organic material or preying on herbivores. In most cases, no intervention is required when you see bugs in the garden. Healthy plants can withstand some munching.

See the Green-Up fact sheet “Common Garden Pests” for advice on dealing with basic pests.

A few pests, such as Colorado Potato Beetles, can do tremendous damage to plants in a short time. The best prevention is to check the undersides of potato leaves frequently, to look for small orange egg clusters. If you find any, scrape them off or squash them. If you happen to see small orange and black larvae eating the leaves of your potato plants, knock them off into a container of water with a bit of vegetable oil. The larvae will drown, and can be emptied into a hole in the ground.

It can be very helpful to install one or two bird nest boxes in and around your garden. Many insectivorous birds such as wrens, tree swallows and chickadees can be enticed to nest in your yard if you provide a home. Websites such as [www.npwrc.usgs.gov](http://www.npwrc.usgs.gov) have plenty of excellent plans for building nest boxes.

**Harvesting** – Many vegetables are best when they're young and tender. This is especially true with radishes, beans, peas, spinach and lettuce. Others, such as beets, carrots and chard keep in good eating condition for several weeks or longer.

**Grow an Extra Row** – As you develop skill and confidence with growing your own vegetables, think about growing some extra food to give away to less fortunate members of the community. Shelters such as the Brock Mission or Cameron House always appreciate extra food. Call the YWCA at 743-3526 for advice on where to take extra vegetables.

You'll probably find that you have plenty of questions as you progress in your adventure with growing your own food. Listed below are some excellent local resources where you can find help, and talk to others with a passion for gardening!

## Useful Resources for Food Gardening

**Peterborough Green-Up Resource Library** – Peterborough Green-Up has an excellent collection of books on gardening and landscaping. You can borrow books from the library with a \$15 annual membership fee, or stop by and browse during office hours. Call 745-3238 for further information and directions to the office.

**Peterborough Ecology Park** – The Ecology Park is a 5-acre learning centre for gardening and ecological land use. Located in the southeast corner of Peterborough's Beavermead Park on Ashburnham Drive, it contains a variety of display gardens, including an organic food garden. Peterborough's Ecology Park is also a source for gardening supplies such as compost, mulch materials and natural pest controls, as well as plants including heirloom vegetables and native plants. Displays and services are available from May through October. For more information call Peterborough Green-Up at 745-3238.

**Community Gardens** – If you don't have the space to plant your own garden, contact Joan Mercer at the YWCA (743-3526) to find out about community garden opportunities in your area.

**Master Gardeners** – Master Gardeners are local volunteers with extensive gardening experience who are available to answer gardening questions. Call the Master Gardener Hotline at 741-4905.

**Canadian Organic Growers** – The national network of organic growers offers special events, a lending library and plenty of other resources to help gardeners go organic. Visit their website at [www.cog.ca](http://www.cog.ca).

### Seed Sources

- William Dam Seeds (good source of untreated seeds) Box 8400, Dundas, Ont. L9H 6M, [www.damseeds.com](http://www.damseeds.com)
- Stokes Seeds (wide selection of vegetable seeds - ask for untreated seeds) Box 10, Thorold, Ontario L2V 5E9, [www.stokeseeds.com](http://www.stokeseeds.com)
- Salt Spring Seeds (organic seeds with many unusual and heirloom varieties) Box 444, Ganges P.O., Salt Spring Island, B.C. V8K 2W1 [www.saltspringseeds.com](http://www.saltspringseeds.com)

### Heirloom Seeds

- Seeds of Diversity (Canadian network for heirloom seed exchange) [www.seeds.ca](http://www.seeds.ca)
- Seed Savers Exchange (U.S. company specializing in heirloom seeds), [www.seedsavers.org](http://www.seedsavers.org)
- Southern Exposure (U.S. company specializing in heirloom seeds) [www.southernexposure.com](http://www.southernexposure.com)